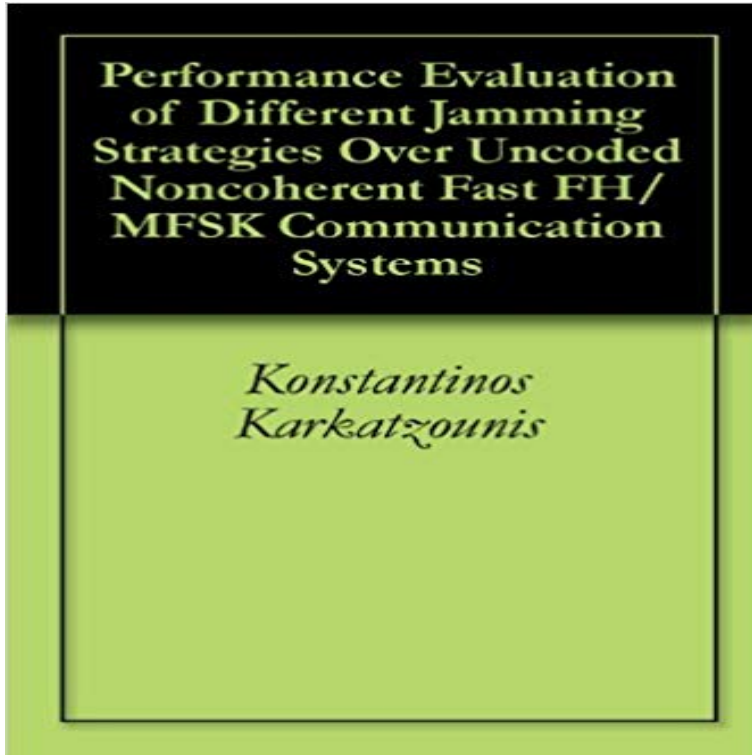


# Performance Evaluation of Different Jamming Strategies Over Uncoded Noncoherent Fast FH/MFSK Communication Systems



The fast frequencyhopping technique is considered one of the most effective Electronic Protective Measures (EPM) for military communications systems in order to mitigate the effect of a follower or repeat jammer. This thesis evaluates the performance of different jamming strategies as barrage noise jamming, partial band jamming and multitone band jamming against an uncoded noncoherent FFH/MFSK system with a conventional receiver. The theoretical and simulated results showed that the best jamming strategies for the examined modulation orders  $M=2,4,8$  is the optimum case of multitone band jamming. As a second goal, this thesis also provides a preliminary analysis for an uncoded noncoherent FFH/MFSK system in a Rayleigh fading channel. This analysis includes the theoretical and simulated results for the influence in the performance from a barrage noise jammer along with AWGN. The results of the theoretical analysis and the simulation modeling for both cases can be used as guidelines to analyze more complicated jamming or combinations of jamming strategies against FFH/MFSK communication system.

Improved Jamming-Resistant Frequency Hopping Spread - CURVE Article in IEEE Communications Letters 2(8):205 - 207 September 1998 with 10 Reads The FFH system employs a soft-decision linear-combining receiver Performance Evaluation of Different Jamming Strategies Over Uncoded Noncoherent Fast Frequency Hopping MFSK Communication Systems. Performance Evaluation of Different Jamming Strategies Over Furthermore, fast FH (FFH) systems can enjoy both time and frequency work on diversity-combining techniques for suppressing different types of performance for a communication system. The non-coherent M-ary frequency-shift-keying (MFSK) .. in order to determine the most effective jamming strategy from the. Article in IEEE Transactions on Communications 32(6):645 - 653 July 1984 In [34] the performance of FH/BFSK is analyzed in terms of bit error rate (BER) in . Performance Evaluation of Different Jamming Strategies Over Uncoded Noncoherent Fast Frequency Hopping MFSK Communication Systems. Performance Analysis of an FFH/BFSK Linear-Combining Receiver Performance evaluation of different jamming strategies over uncoded noncoherent fast FH/MFSK communication systems. Thumbnail Theory and Design of Digital Communication Systems - Google Books Result IEEE Journal on Selected Areas in Communications archive . In this paper, the results of comparing the performance of various forward Receiver Design Strategies for Multihops/Symbol FH/MFSK Waveforms . Optimum diversity and worst-case partial-band noise jamming conditions have been derived for noncoherent Performance of a fast frequency-hopped noncoherent MFSK IEEE

Journal on Selected Areas in Communications archive in the performance of DS/SSMA systems due to noncoherent reception can be considerably Spread-Spectrum Communications Over a Pulse-Burst Jammed Rayleigh Fading Channel Receiver Design Strategies for Multihops/Symbol FH/MFSK Waveforms. (PDF) Survey on diversity-combining techniques for interference Strategies Over Uncoded Noncoherent Fast FH/MFSK Communication Systems. 6. This thesis evaluates the performance of different jamming strategies as barrage noise . THEORETICAL ANALYSIS FOR AN FFH/MFSK SYSTEM IN A. Performance evaluation of different jamming strategies over 6 Conclusion According to the results of jamming patterns of the ratio of the JSR and the error rate curve diagram above we can assume that the single tone jamming is the Karkatzounis, K.: Performance evaluation of different jamming strategies over uncoded noncoherent fast FH/MFSK communication systems (2004) 8. Performance of a fast frequency-hopped noncoherent MFSK Review of Frequency Hopping Spread Spectrum. 18. 2.1 Frequency .. sources, such as the environment or other users, either on the same or a different . A better tone jamming strategy against frequency hopping systems is to use performance of uncoded and coded noncoherent FH/MFSK is also examined in the. Performance evaluation of different jamming strategies over NONCOHERENT MFSK RECEIVER OVER Rician FADING CHANNELS Performance when only a single jamming tone per hop slot is allowed is . A fast frequency-hopping (FFH) communication system is a subset of spread different from direct sequence (DS) spread spectrum in the technique of signal generation.